

## Description of *Pteryarchia elatica* n.sp. (Gastropoda : Muricidae) from the Gulf of Aqaba

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**ABSTRACT.** *Pteryarchia elatica* n.sp. is described from off Elat and compared with *P. triptera* (Born, 1778).

**RESUME.** *Pteryarchia elatica* n.sp. est décrit à partir de spécimens originaires d'Elat, dans le Golfe d'Aqaba. La nouvelle espèce a été confondue avec *P. triptera* pendant de nombreuses années. Elle se distingue de celle-ci par sa forme plus triangulaire, sa couleur uniforme orange et par son développement larvaire lécitotrophe, *P. triptera* présentant un développement larvaire planctotrophe.

### INTRODUCTION

A shell that was identified by some authors, and by myself, as an orange coloured variety of *Pteryarchia triptera* (Born, 1778) is known living off Elat. Research for specimens with a preserved protoconch was finally successful, and has led to the discovery that both forms have a different larval development, planctotrophic in *P. triptera* (Fig. 1), lécitotrophic in the orange specimen (Fig. 2). Such differences have already been observed in other Red Sea muricids : *Naquetia fosteri* D'Attilio & Hertz, 1987 and *Haustellum longicaudum* (F.C. Baker, 1891) were respectively separated from *N. barclayi* (Reeve, 1845) (D'Attilio & Hertz, 1987), and from *H. haustellum* (Linnaeus, 1758) (Houart, 1999) on basis of the same criteria.

The new species is regularly seen in collections identified as *Pteryarchia elaticus* (sic), a name originating from dealer's lists in the eighties. Despite active research I was unable to locate any description, but finding the name appropriate, I decided to keep it. However, the genus *Pteryarchia* being inappropriate, the new species is here included in *Pteryarchia* Houart, 1995. The shell of *Pteryarchia* differs from *Pteryarchia* in its different axial sculpture : species of *Pteryarchia* have trivarical sculpture from first, second, or rarely third teleoconch whorl, or 6-8 axial nodes on first and second whorl, if not trivarical from first whorl. *Pteryarchia* has 7-11 strong axial ribs from first to third or fourth teleoconch whorl; from fourth or fifth whorl, some axial ribs change into varices. The aperture in *Pteryarchia* is smooth, or rather strongly, briefly lirate within, instead of denticulate in *Pteryarchia* (Houart, 1995 : 128).

### Abbreviations.

HUJ : Zoological Museum, Hebrew University of Jerusalem, Israël.

IRSNB: Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium.

MNHN: Muséum national d'Histoire naturelle, Paris, France.

RH: collection R. Houart.

### SYSTEMATICS

Family MURICIDAE Rafinesque, 1815

Subfamily MURICINAE Rafinesque, 1815

Genus *Pteryarchia* Houart, 1995

Type species, by original designation : *Murex tripterus* Born, 1778, Indo-West Pacific.

#### *Pteryarchia elatica* n.sp.

Figs 2, 3-5

*Murex tripterus* – Leehman, 1973 : 3 (not *Murex tripterus* Born, 1778).

*Pteryarchia tripterus* – anonymous, 1976 : 17 (not *Murex tripterus* Born, 1778).

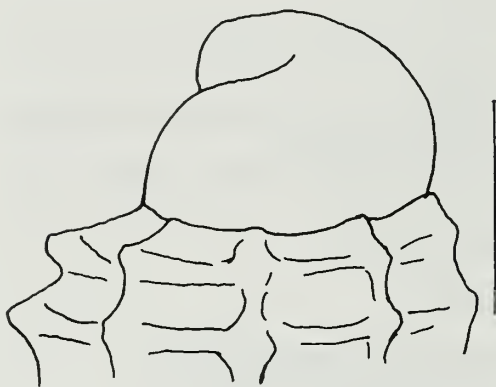
### Type material.

Red Sea, Sinai, Gulf of Aqaba, Israel, off Elat, 20 m, 1991, holotype HUJ 37845.

Paratypes : Sinai, Israel, Elat, dived 30 m, 1 IRSNB; Elat, 30 m, 1 MNHN; 22 kms south of Elat, 40 m, on sand, 1 RH; Elat, North Gulf of Aqaba, on day dive, 10-15 m (immature lip), 1 RH; Gulf of Aqaba, probably Elat, 3 E. Heiman; Sinai Peninsula, 25 m, among sand and rocks, 2 G. Poppe.

**Type locality.**

Red Sea, Sinai Peninsula, Gulf of Aqaba, Israel, off Elat, 20 m, 1991.

**1****2**

1. Protoconch of *Pteryarchia triptera* (Born, 1778), Guam, Orote Cliffs, 50 ft (first whorls broken off), RH (scale bar : 0.5 mm). 2. Protoconch of *Pteryarchia elatica* n.sp., Gulf of Aqaba, coll. S. Geva (scale bar : 0.5 mm).

**Distribution.**

Red Sea, Gulf of Aqaba, in the vicinity of Elat, living at 10-40 m, among sand and rocks.

**Description.**

Shell up to 58 mm in length at maturity, triangular, squamous, webbed. Spire high with 1.5 protoconch whorls, and up to 7.5 broad, weakly angulate teleoconch whorls. Suture adpressed. Protoconch

small, whorls rounded, smooth, glossy. Terminal varix delicate, thin, curved.

Axial sculpture of teleoconch whorls consisting of strong, broad ribs, changing into webbed, squamous varices and intervarical nodes from fourth whorl : first whorl with 8 ribs, second and third with 7, from fourth whorl, some axial ribs change into varices. Three varices and elongate intervarical knob from fifth to last whorl. Spiral sculpture of high, squamous, primary, secondary, and tertiary cords and threads : first and second whorl with 2 primary cords; third with 2 primary and 1 or 2 secondary cords; from fourth whorl, abapical primary cord becoming carinal cord, adapical cord diminishing in strength, melted in shoulder threads, with a second, weakly smaller adapical cord, arising from fourth whorl. Last whorl with 11-14 threads and two cords on shoulder; abapically with three major cords, and numerous minor cords and threads of various strength.

Aperture large, ovate. Columellar lip narrow, with 10-13 strong, weakly elongate knobs. Adapical and abapical knobs strongest. Rim partially erect, adherent at adapical extremity. Anal notch narrow, fairly deep. Outer lip erect, crenulate, with 8 or 9 strong denticles within; four or five abapical denticles smaller.

Siphonal canal long, broad, webbed, strongly dorsally recurved at tip, narrowly open, with numerous cords and threads of various strength.

Orange with lighter coloured or white apertural denticles.

Operculum light brown, inverted tear-shaped, with terminal nucleus.

**Remarks.**

*Pteryarchia elatica* differs from *P. triptera* (Born, 1778) in having a more triangular outline, in being more angulate, in having an orange coloured shell instead of white in *P. triptera*, and in having a rounded protoconch of 1.5 whorls (Fig. 2) compared to the conical protoconch of *P. triptera*, consisting of 3+ whorls (Fig. 1).

**Etymology.**

*elatica* : from Elat.

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**REFERENCES**

Anonymous 1976. Family Muricidae. *La Conchiglia* 8 (93-94) : 16-18.

- D'Attilio, A. & Hertz, C.M. 1987. A new species of *Naquetia* (Muricidae) from the Gulf of Aqaba. *The Veliger* 30 (2): 190-195.
- Houart, R. 1995. *Pteryarchia* n.gen. and *Vaughtia* n.gen., two new muricid genera (Gastropoda, Muricidae: Muricinae and Ocenebrinae). *Apex* 10 (4): 127-136.
- Houart, R. 1999. Review of the Indo-West Pacific species of *Haustellum* Schumacher, 1817 and comments on *Vokesimurex* Petuch, 1994 (Gastropoda: Muricidae) with the description of *H. bondarevi* n.sp. *Apex* 14 (3-4) : 81-107.
- Leehman, E. 1973. *Murex* from Aqaba. *Hawaiian Shell News* 21 (8) : 3.

3-5. *Pteryarchia elatica* n.sp. 3-4. Red Sea, Sinai Peninsula, Gulf of Aqaba, Israël, off Elat, 20 m, holotype HJ 37845, 55.2 X 34.9 mm. 5. 22 kms south of Elat, 40 m, on sand, paratype RH, 56.9 X 38.7 mm. 6-7. *Pteryarchia triptera* (Born, 1778) 6. Guam, SE of Orote Point, approximately 19 m depth, RH (leg H. Conley), 38 X 23.9 mm. 7. Guam, Orote Point, 22 m, RH (leg H. Conley), 64 X 36.2 mm.

